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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,427	08/23/2001	Ali Bani-Hashemi	2001 P 05443 US	1376

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Siemens Corporation
Intellectual Property Department
186 Wood Avenue South
Iselin, NJ 08830

EXAMINER

BRIER, JEFFERY A

ART UNIT	PAPER NUMBER
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2672

12

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/818,427

Applicant(s)

BANI-HASHEMI ET AL.

Examiner

Jeffery A Brier

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,9-13,15-26,29-35 and 37-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-26,29-35, 38, 40 and 41 is/are allowed.
- 6) ☒ Claim(s) 1-6,9-13,15-22,37 and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Detailed Action

Response to Amendment

1. The amendment filed on 6/01/2004 has been entered.

Drawings

2. The proposed changes to figures 1, 23 and 27 are approved. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the proposed changes have been approved. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Response to Arguments

3. Applicant's acceptance of the indication of allowable subject matter is noted. The indicated allowability of claim 8, now claim 1, is withdrawn in view of the newly discovered reference(s) to the June 22, 2004 U.S. Patent to Deleeuw, U.S. Patent No. 6,753,879, filed July 3, 2000. Rejections based on the newly cited reference(s) follow.

The indication of allowable subject matter for claims 14, 28, 31, and 36, now claims 13, 23, 31, and 35, is maintained.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-6 and 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Deleeuw, U.S. Patent No. 6,753,879.

Figures 6a and 6b shows computer generated circles 54 surrounding the path the instrument 52 is to take during carving of object 50.

A detailed analysis of the claims follows.

Claim 1:

Deleeuw teaches a method for augmented reality guided instrument positioning (*Computer 16 generates an augmented reality image such as 54 shown in figure 6a.*), comprising the steps of:

establishing a viewpoint (*A beginning point is a viewpoint for the user.*), from which a line of sight (*A straight line is a line of sight.*) to a point on a target defines a path for an instrument to follow during a positioning of the instrument to the point on the target (*The path defined by cylinder 54 is a path the instrument will follow from one end of object 54 to the other end of object 54. The other end of the object 54 is considered to be the claimed target since the claim does not*

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define what a target is and since the completion of the carving of object 54a is the user's target. The viewpoint is considered to be at least the one end of the object 54.);

marking the path with a plurality of graphical markers in which the plurality of markers comprises at least one ring centered on the path (*The computer generated image 54 superimposed onto block 50 comprises at least one ring centered on the path.*); and

aligning the instrument along the line of sight to the point on the target (*The user uses the computer generated image 54 to align the instrument 52 along the path that allows carving of block 50 into object 54a.*).

Claim 2:

Deleeuw teaches the method according to claim 1, further comprising the step of moving the instrument along the path towards the point on the target, subsequent to said aligning step (*The user moves the carving instrument 52 along the path towards the target on the block 50.*).

Claim 3:

Deleeuw teaches the method according to claim 1, further comprising the step of rendering the target as a graphics object (*The computer generated object 54 is rendered as graphics objects, see column 2 line 2 which*

discussed computer generated images, the term computer generated images includes computer generated graphics objects.).

Claim 4:

Deleeuw teaches the method according to claim 3, wherein the graphics object comprises a marker that marks the point on the target (*As stated in the discussion of claim 1 the target is considered to be the other end of object 54. The two concentric circles at the other end of object 54 marks the point on the target that represents the end of the carving of block 50.).*

Claim 5:

Deleeuw teaches the method according to claim 4, wherein the marker has a circular shape, and is centered on the point on the target (*Figure 6a clearly shows markers having a circular shape which are centered on a point on the target. As stated in the discussion of claim 1 the target is the portion of object 54 that represents at least the completion of the carving of block 50 into object 54a.).*

Claim 6:

Deleeuw teaches the method according to claim 5, wherein the circular shape is a ring (*The computer generated shape shown in figure 6a is clearly a ring.).*

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Claim 7 (Canceled).

Claim 8 (Canceled).

Claim 9:

Deleeuw teaches the method according to claim 1, wherein the at least one ring comprises at least two rings having different diameters (*The computer generated shape shown in figure 6a is clearly two rings having different diameters*).

Claim 10:

Deleeuw teaches the method according to claim 1, wherein said aligning step comprises the steps of:

positioning a tip of the instrument on the path, at an entry point on a surface of a physical object corresponding to the target (*Inherently to carve the center of object 54a the user will place the tip of the knife 52 at the entry point on the surface of block 50 at the one end of block 50 corresponding to the other end of block 50.*); and

rotating the instrument around the tip on the entry point until the instrument is aligned with the line of sight toward the point on the target (*Inherently to carve the center of object 54a the user will rotate knife 52 at the entry point of the one end of block 50 until the knife is aligned with the line of sight from the one end to the other end of block 50.*)

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Claim 11:

Deleeuw teaches the method according to claim 10, further comprising the step of marking the entry point on the physical object (*Block 50 is a physical object where the computer generated image 54 is projected onto block 50 such that entry point of the block 50 is marked by the computer generated image 54.*).

Claim 12:

Deleeuw teaches the method according to claim 11, wherein said entry point is marked by a graphical object (*Computer generated image 54 is a graphical object.*).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 13, 15-22, 37, and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 is indefinite because after the amendment to claim 13 it is not clear what is meant by the identifying step since “the at least one axis marker on the instrument” lacks antecedent basis in the claim. The constructing and rendering step

constructs and renders at least one axis marker while the identifying step identifies the at least one axis marker on the instrument. It is not clear if the identifying step is analyzing the instrument to identify the axis marker on the instrument or does applicant intend to claim something else. Dependent claims 15-22 do not correct this issue.

Claim 16 conflicts with the amendment made to claim 13. Claim 13 was amended to claim construction and rendering at least one axis marker while claim 16 claims using an existing feature of the instrument as the at least one axis marker. Constructing and rendering at least one axis marker is different than using an exiting feature as the at least one axis marker.

Claim 17 conflicts with the amendment made to claim 13 since claim 17 designs the actual instrument to include the at least one axis marker while claim 13 renders the axis marker as a graphical marker. How can the actual instrument include the graphical marker?

Claim 18 conflicts with the amendment made to claim 13 since claim 17 adds the at least one axis marker to a structure of the actual instrument while claim 13 renders the axis marker as a graphical marker. How can the actual instrument include the graphical marker?

Claims 16-22 all claim "the at least one axis marker". It is not clear if this is referring to the graphical marker of claim 13 or to an axis marker that is not the graphical marker. To correct this issue claim 13 line 4 should be amended to claim "graphical axis marker" instead of "graphical marker" and claims 16-22 to claim "the graphical axis marker" instead of "the at least one axis marker".

Claim 37 is indefinite because this claim claims distance information is observed from an alignment of the virtual target point and the virtual instrument while parent claim 35 claim the distance information is graphically overlaid onto the virtual instrument. Claim 37 needs to be amended or cancelled.

Claim 39 is indefinite because it is not clear how a dimensioned ring achieves a pre-defined configuration when the actual instrument reaches the actual target when it was "dimensioned".

Allowable Subject Matter

8. Claims 13, 15-22, 37, and 39 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. Claims 23-26, 29-35, 38, 40 and 41 are allowed.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A Brier whose telephone number is 703-305-4723. The examiner can normally be reached on M-F from 6:30 to 3:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached at (703) 305-4713). The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffery A Brier
Primary Examiner
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